

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (original): Vacuum load lock semiconductor wafer processing equipment, comprising:

- a load lock chamber,
- a transfer chamber,
- a reaction chamber located above said transfer chamber, and
- a robot located outside said load lock chamber that includes a wafer transfer arm,

wherein said wafer transfer arm is adapted to operate inside said load lock chamber and inside a vacuum, and is adapted to transfer said semiconductor wafers between the load lock chamber, the transfer chamber, and the reaction chamber.

Claim 2 (currently amended): The vacuum load lock semiconductor processing equipment described in Claim 1, further comprising:

- a load lock chamber exhaust port through which gases within the load lock chamber can be evacuated,

- a transfer chamber exhaust port through which gases within the transfer chamber can be evacuated, and

- a reaction chamber exhaust port through which gases within the reaction chamber can be evacuated,

~~wherein said reaction chamber and said transfer chamber are evacuated by switching between said reaction chamber exhaust port and said transfer chamber exhaust port.~~

Application 10/072,620
Amendment Dated 23 January 2004
Reply to Office Action Mailed 29 August 2003

Claim 3 (original): The vacuum load lock semiconductor processing equipment described in Claim 2, wherein said transfer chamber is evacuated from a position lower than said semiconductor wafers.

Claim 4 (original): The vacuum load lock semiconductor processing equipment described in Claim 1, further comprising:

an insulation separating plate adapted to separate said transfer chamber from said reaction chamber.

Claim 5 (original): The vacuum load lock semiconductor processing equipment described in Claim 1, wherein said reaction chamber comprises an insulating material.

Claim 6 (original): The vacuum load lock semiconductor processing equipment described in Claim 1, wherein said transfer chamber and said reaction chamber are configured to prevent formation of a film on an interior surface of said transfer chamber.

Claim 7 (original): A method of processing semiconductor wafers, comprising:

providing a load lock chamber, a transfer chamber, and a reaction chamber, wherein said reaction chamber is located above said transfer chamber, providing a robot that includes a wafer transfer arm, wherein said wafer transfer arm is adapted to operate inside said load lock chamber and inside a vacuum, and

transferring said semiconductor wafers between said load lock chamber, said transfer chamber, and said reaction chamber using said wafer transfer arm.

Claim 8 (currently amended): The method described in Claim 7, further comprising:

evacuating said reaction chamber by removing a gas within the reaction chamber through a reaction chamber exhaust port; and

evacuating said transfer chamber by removing a gas within the transfer chamber through ~~switching between a reaction chamber exhaust port and a transfer chamber exhaust port.~~

Claim 9 (currently amended): The method described in Claim 7, further comprising:

evacuating said transfer chamber from a position lower than said semiconductor wafers.

Claim 10 (original): The method described in Claim 7, further comprising:

preventing a reaction gas in said reaction chamber from entering said transfer chamber by introducing an inactive gas into said transfer chamber.

Claim 11 (currently amended): The method described in Claim 7, further comprising:

preventing deposition on an interior surface of said reaction chamber by providing an insulating material on ~~comprising~~ said interior surface of said reaction chamber ~~of an insulating material.~~

Claim 12 (original): The method described in Claim 7, further comprising:

preventing deposition on an interior surface of said transfer chamber by isolating said transfer chamber from said reaction chamber.